

IN THE CLAIMS:

Please cancel Claims 2, 9 and 12 without prejudice or disclaimer of subject matter and amend the claims as shown below. The claims, as currently pending in the subject application, now read as follows:

1. (Currently Amended) A data transfer method ~~in an image forming apparatus in which communication between a first controller and a second controller is performed via signal lines, wherein the first controller which~~ controls an engine section for forming an image and a second controller which transmits image data to the first controller, wherein the engine section includes a nonvolatile memory, ~~and wherein the second controller transmits image data to the first controller; the method comprising steps of:~~

wherein in an image forming operation mode of forming an image with the engine section, the method comprises:

notifying the second controller of a condition change of the engine section by the first controller, by changing a signal level of a report signal line, and

transmitting a condition request instruction by the second controller to the first controller via a data signal line, in response to the notification of the condition change; and

wherein in a rewrite mode of rewriting the nonvolatile memory, the method comprises:

transmitting a rewrite instruction by the second controller to the first controller via the data signal line,

transmitting rewrite data by the second controller to the first controller via the data signal line, in accordance with the signal level of the report signal line changed by the first controller in response to the rewrite instruction, and

rewriting the nonvolatile memory of the engine section by the first controller, by the rewrite data transmitted from the second controller,

transferring rewrite data from the second controller to the first controller via a signal line to rewrite the nonvolatile memory; in synchronization with a control signal notified from the first controller to the second controller via another signal line; and

rewriting the nonvolatile memory of the engine section by the rewrite data transferred in synchronism;

2. (Cancelled)

3. (Currently Amended) The method according to claim 1, further comprising the steps of:

in the image forming operation mode, transmitting a condition of the engine section by the first controller to the second controller via a condition signal line in response to the condition request instruction, and

in the rewrite mode, transmitting the condition of the first controller by the first controller to the second controller via the condition signal line, in accordance with the signal level of the report signal line.

wherein the first controller controls the control signal to notify the second controller of a state of the first controller:

4. (Currently Amended) The method according to claim 3, wherein the state condition of the first controller is one of a data transfer error, an erase or rewrite operation result of the nonvolatile memory, and an end of the rewrite operation of the nonvolatile memory.

5. (Currently Amended) The method according to claim 1, wherein the first controller is able to change the signal level of the report signal line to a first level and a second level,

wherein in the image forming operation mode, the second controller transmits the conditional request instruction to the first controller via the data signal line after the signal level of the report signal line is changed from the first level to the second level by the first controller, and

wherein in the rewrite mode, the second controller transmits the rewrite data to the first controller after the signal level of the report signal line is changed from the second level to the first level by the first controller, controls the control signal to an OFF state in accordance with data reception from the second controller and to an ON state when preparation for next data reception is ended:

6. (Currently Amended) The method according to claim 5 [[1]], wherein in the rewrite mode, the first controller transmits the condition of the first controller to the

second controller via the condition signal line while the report signal line is at the second level, after changing the signal level of the report signal line from the first level to the second level, monitors a change of the control signal to an ON state for a predetermined time to detect a state of the first controller.

7. (Currently Amended) The method according to claim 6, further comprising a step in the rewrite mode of determining that an error has occurred in the rewrite operation in a case where a predetermined time period elapses before the signal level of the report signal line is changed to the first level after being changed to the second level, wherein the predetermined time changes depending on at least a size of the rewrite data to be transferred and a block size of the nonvolatile memory to be erased.

8. (Previously Presented) The method according to claim 1, wherein the rewrite data is a control program code data.

9. (Cancelled)

10. (Original) The method according to claim 1, wherein the nonvolatile memory is a flash memory.

11. (Currently Amended) An image forming apparatus including a first controller which controls an engine section for forming an image and a second controller which transmits image data to the first controller, in which communication between a first

controller and a second controller is performed via signal lines, wherein the first controller controls an engine section for forming an image, wherein the engine section includes a nonvolatile memory, and wherein the image forming apparatus is configured to operate in an image forming operation mode of forming an image with the engine section, or a rewrite mode of rewriting the nonvolatile memory, and wherein the second controller transmits image data to the first controller; the apparatus comprising:

signal lines for communication between the first controller and the second controller, wherein the signal lines include a report signal line and a data signal line, wherein a signal level of the report signal line is changed by the first controller, and wherein the data signal line is for transmitting data from the second controller to the first controller;

means for, in the image forming operation mode, notifying the second controller of a condition change of the engine section by the first controller, by changing a signal level of the report signal line;

means for, in the image forming operation mode, transmitting a condition request instruction by the second controller to the first controller via a data signal line, in response to the notification of the condition change;

means for, in the rewrite mode, transmitting a rewrite instruction by the second controller to the first controller via the data signal line;

means for, in the rewrite mode, transmitting rewrite data by the second controller to the first controller via the data signal line, in accordance with the signal level of the report signal line changed by the first controller in response to the rewrite instruction; and

means for, in the rewrite mode, rewriting the nonvolatile memory of the engine section by the first controller, by the rewrite data transmitted from the second controller.

transfer means for transferring rewrite data from the second controller to the first controller via a signal line to rewrite the nonvolatile memory, in synchronization with a control signal notified from the first controller to the second controller via another signal line; and

rewriting means for rewriting the nonvolatile memory of the engine section by the rewrite data transferred in synchronism.

12. (Cancelled)